

11. (Amended) The non-linear resistor according to claim 8, wherein said side-surface high resistance layer is formed of a glass containing phosphorus as a main component.

REMARKS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 3-20 are presently pending in this application, Claims 9, 10 and 12-20 having been withdrawn from further consideration by the Examiner, Claims 8 and 11 having been amended by the present amendment.

In the outstanding Office Action, Claims 4, 7 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Nied et al. (U.S. Patent 5,264,819); Claims 3-5 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Juelke et al. (U.S. Patent 4,559,167); Claims 3 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nied et al. in view of Matsuoka et al. (U.S. Patent 3,872,582); Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nied et al. in view of Seike et al. (U.S. Patent 4,835,508) and Claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nied et al., Sokoly et al. (U.S. Patent 4,272,411), or Ellis et al. (U.S. Patent 4,317,101) in view of JP 5002786 (hereinafter "JP '786").

Briefly, Claim 8 of the present invention is directed to a non-linear resistor including a sintered body comprising zinc oxide as a main component, a side-surface high resistance layer arranged at a side-surface of the sintered body, and being formed of at least one substance selected from the group consisting of an aluminum phosphate based-inorganic

adhesive which is an inorganic polymer, an amorphous silica, an amorphous alumina, a complex of an amorphous silica with an organosilicate, a glass containing lead as a main component, a glass containing phosphorus as a main component, a crystalline inorganic substance containing Zn-Sb-Fe-O as a constitutional component, a crystalline inorganic substance containing Fe-Mn-Bi-Si-O as a constitutional component, a combination of a crystalline inorganic substance containing Zn-Si-O as a constitutional component with a crystalline inorganic substance containing Zn-Sb-Fe-O as a constitutional component, a crystalline silica (SiO_2), alumina (Al_2O_3), mullite ($\text{Al}_6\text{Si}_2\text{O}_{13}$), cordierite ($\text{Mg}_2\text{Al}_4\text{Si}_5\text{O}_{18}$), titanium oxide (TiO_2), and zirconium oxide (ZrO_2), and an electrode arranged at upper and lower surfaces of the sintered body, wherein an end-to-end distance between an end of the electrode and an end of the nonlinear resistor including the side-surface high resistance layer falls within a range of 0 mm to a thickness of the side-surface high resistance layer + 0.01 mm.

The outstanding Office Action asserts that Nied et al. and Juelke et al. disclose a nonlinear resistor as recited in Claim 8. Nevertheless, neither Nied et al. nor Juelke et al. teach "a side-surface high resistance layer arranged at a side-surface of said sintered body, and being formed of at least one substance selected from the group consisting of: an aluminum phosphate based-inorganic adhesive which is an inorganic polymer, an amorphous silica, an amorphous alumina, a complex of an amorphous silica with an organosilicate, a glass containing lead as a main component, a glass containing phosphorus as a main component, a crystalline inorganic substance containing Zn-Sb-Fe-O as a constitutional component, a crystalline inorganic substance containing Fe-Mn-Bi-Si-O as a constitutional component, a combination of a crystalline inorganic substance containing Zn-Si-O as a constitutional component with a crystalline inorganic substance containing Zn-Sb-Fe-O as a constitutional

component, a crystalline silica (SiO_2), alumina (Al_2O_3), mullite ($\text{Al}_3\text{Si}_2\text{O}_{13}$), cordierite ($\text{Mg}_2\text{Al}_4\text{Si}_5\text{O}_{18}$), titanium oxide (TiO_2), and zirconium oxide (ZrO_2)” as recited in amended Claim 8. Therefore, the subject matter recited in amended Claim 8 is believed to be distinguishable from Nied et al. and Juelke et al. and thus is not believed to be anticipated thereby.

Likewise, none of Matsuoka et al., Seike et al., Sokoly et al., Ellis et al. and JP ‘786 is believed to teach the side-surface high resistance layer recited in amended Claim 8, and thus the subject matter recited in amended Claim 8 is also believed to be distinguishable from Matsuoka et al., Seike et al., Sokoly et al., Ellis et al. and JP ‘786.

Because none of Nied et al. and Juelke et al., Matsuoka et al., Seike et al., Sokoly et al., Ellis et al. and JP ‘786 discloses the side-surface high resistance layer recited in Claim 8 as amended above, even the combined teachings of these applied references are not believed to render the subject matter recited in Claim 8 obvious.

For the foregoing reasons, Claim 8 is believed to be allowable. Furthermore, since Claims 3-7 and 11 depend directly from Claim 8, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 3-7 and 11 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Finally, the attention of the Patent Office is directed to the change of address of Applicants' representative, effective January 6, 2003:

Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

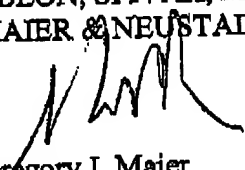
1940 Duke Street

Alexandria, VA 22314.

Please direct all future communications to this new address.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Robert T. Pous
Registration No. 29,099
Attorneys of Record



22850

Tel: (703) 413-3000
Fax: (703) 413-2220
GJM/RTP/AY:fmw
PATYAKY\19s\198009\ame.wpd

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IN THE CLAIMS

Please amend Claims 8 and 11 as follows:

--8. (Amended) A non-linear resistor comprising:

a sintered body comprising zinc oxide as a main component;

a side-surface high resistance layer arranged at a side-surface of said sintered body,

and being formed of at least one substance selected from the group consisting of:

an aluminum phosphate based-inorganic adhesive which is an inorganic

polymer,

an amorphous silica,

an amorphous alumina,

a complex of an amorphous silica with an organosilicate,

a glass containing lead as a main component,

a glass containing phosphorus as a main component,

[a glass containing bismuth as a main component,]

a crystalline inorganic substance containing Zn-Sb-Fe-O as a constitutional

component,

a crystalline inorganic substance containing Fe-Mn-Bi-Si-O as a constitutional

component,

a combination of a crystalline inorganic substance containing Zn-Si-O as a

constitutional component with a crystalline inorganic substance containing Zn-Sb-Fe-O as a

constitutional component,

a crystalline silica (SiO_2),

alumina (Al_2O_3),

mullite ($\text{Al}_6\text{Si}_2\text{O}_{13}$),

cordierite ($\text{Mg}_2\text{Al}_4\text{Si}_3\text{O}_{18}$),

titanium oxide (TiO_2), and

zirconium oxide (ZrO_2),

an epoxy resin,

a phenol resin,

a melamine resin,

a fluorocarbon resin, and

a silicone resin]; and

an electrode arranged at upper and lower surfaces of the sintered body,

wherein an end-to-end distance between an end of the electrode and an end of the nonlinear resistor including the side-surface high resistance layer falls within a range of 0 mm to a thickness of the side-surface high resistance layer + 0.01 mm.

11. (Amended) The non-linear resistor according to claim 8, wherein said side-surface high resistance layer is formed of a glass containing phosphorus as a main component[, or a glass containing bismuth as a main component].--